SCORE Search Results Details for Application 10500680 and Search Result 20070711_172431_us-10-500-680-1.rup.

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This page gives you Search Results detail for the Application 10500680 and Search Result 20070711_172431_us-10-500-680-1.rup.

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OM protein - protein search, using sw model

Run on:         July 12, 2007; 07:29:12 ; Search time 362 Seconds
                                          (without alignments)
                                          91.812 Million cell updates/sec

Title:          US-10-500-680-1
Perfect score:  159
Sequence:       1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table:  BLOSUM62
                Gapop 10.0 , Gapext 0.5

Searched:       3281787 seqs, 1072124677 residues

Total number of hits satisfying chosen parameters:      3281787

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       UniProt_8.4:*
                1:  uniprot_sprot:*
                2:  uniprot_trembl:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES
```

Result No.	Score	% Query Match	Length	DB	ID	Description
1	123	77.4	28	1	VIP_CANFA	P63289 canis famil
2	123	77.4	28	1	VIP_CAPHI	P63290 capra hircu
3	123	77.4	28	1	VIP_MACMU	P84488 macaca mula
4	123	77.4	28	1	VIP_SHEEP	P63291 ovis aries
5	123	77.4	72	1	VIP_PIG	P01284 sus scrofa
6	123	77.4	72	1	VIP_RABIT	P32649 oryctolagus
7	123	77.4	118	2	Q5TCY7_HUMAN	Q5tcy7 homo sapien
8	123	77.4	145	2	Q7M2Y9_MACFA	Q7m2y9 macaca fasc

9	123	77.4	153	2	Q7TSR4_9MURI	Q7tsr4 arvicanthis
10	123	77.4	169	2	Q5TCY8_HUMAN	Q5tcy8 homo sapien
11	123	77.4	170	1	VIP_BOVIN	P81401 bos taurus
12	123	77.4	170	1	VIP_HUMAN	P01282 homo sapien
13	123	77.4	170	1	VIP_MOUSE	P32648 mus musculu
14	123	77.4	170	1	VIP_RAT	P01283 rattus norv
15	123	77.4	170	2	Q5TCY9_HUMAN	Q5tcy9 homo sapien
16	113	71.1	28	2	Q9PRN8_CARAU	Q9prn8 carassius a
17	112	70.4	72	1	VIP_CAVPO	P04566 cavia porce
18	111	69.8	25	1	VIP_GADMO	P09684 gadus morhu
19	111	69.8	172	2	Q9DE29_BRARE	Q9de29 brachydanio
20	110	69.2	28	1	VIP_ALLMI	P48142 alligator m
21	110	69.2	28	1	VIP_RANRI	P81016 rana ridibu
22	110	69.2	38	2	Q75W94_HALRO	Q75w94 halocynthia
23	110	69.2	38	2	Q8IU37_SEPLE	Q8iu37 sepioteuthi
24	110	69.2	38	2	Q8IU36_PERAM	Q8iu36 periplaneta
25	110	69.2	38	2	Q8IU38_HYDMA	Q8iu38 hydra magni
26	110	69.2	38	2	Q8IU39_DUGJA	Q8iu39 dugesia jap
27	110	69.2	38	2	Q75W92_9PERC	Q75w92 stephanolep
28	110	69.2	38	2	Q75W87_ONCMY	Q75w87 oncorhynchu
29	110	69.2	38	2	Q75W90_9TELE	Q75w90 sardinops m
30	110	69.2	38	2	Q8AYP4_ACISC	Q8ayp4 acipenser s
31	110	69.2	38	2	Q8AYP5_TRAJP	Q8ayp5 trachurus j
32	110	69.2	45	2	Q1ZZB9_PODSI	Q1zzb9 podarcis si
33	110	69.2	62	2	Q53BI4_BUNHO	Q53bi4 bunopithecu
34	110	69.2	62	2	Q53BI3_PONPY	Q53bi3 pongo pygma
35	110	69.2	62	2	Q53BI5_MACMU	Q53bi5 macaca mula
36	110	69.2	62	2	Q53BI2_9PRIM	Q53bi2 gorilla gor
37	110	69.2	70	2	Q4TZX3_ANAPL	Q4tzx3 anas platyr
38	110	69.2	80	2	Q3HS35_ANAPL	Q3hs35 anas platyr
39	110	69.2	86	2	Q4TZY9_9AVES	Q4tzy9 anser anser
40	110	69.2	109	2	Q1ZYS1_RABIT	Q1zys1 oryctolagus
41	110	69.2	138	2	Q98SP4_ONCMY	Q98sp4 oncorhynchu
42	110	69.2	139	2	Q53BH1_HUMAN	Q53bh1 homo sapien
43	110	69.2	139	2	Q53BH0_PANTR	Q53bh0 pan troglod
44	110	69.2	161	2	Q5IFL0_9PRIM	Q5ifl0 saimiri bol
45	110	69.2	162	2	Q5IFK8_PANTR	Q5ifk8 pan troglod

ALIGNMENTS

```
RESULT 1
VIP_CANFA
ID   VIP_CANFA      STANDARD;      PRT;    28 AA.
AC   P63289; P04565;
DT   13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT   13-AUG-1987, sequence version 1.
DT   02-MAY-2006, entry version 12.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Carnivora; Caniformia; Canidae;
OC   Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA   Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT   "Purification and amino acid sequences of dog, goat and guinea pig
RT   VIPs.";
RL   Peptides 7 Suppl. 1:17-20(1986).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
```

```
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   PIR; A60304; A60304.
DR   HSSP; P18509; 1GEA.
DR   Ensembl; ENSCAFG00000000538; Canis familiaris.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043939.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 2
VIP_CAPHI
ID   VIP_CAPHI      STANDARD;      PRT;    28 AA.
AC   P63290; P04565;
DT   13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT   13-AUG-1987, sequence version 1.
DT   07-FEB-2006, entry version 10.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Capra hircus (Goat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC   Pecora; Bovidae; Caprinae; Capra.
OX   NCBI_TaxID=9925;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA   Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT   "Purification and amino acid sequences of dog, goat and guinea pig
RT   VIPs.";
RL   Peptides 7 Suppl. 1:17-20(1986).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   HSSP; P18509; 1GEA.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
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DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043940.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:|.|||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 3
VIP_MACMU
ID   VIP_MACMU      STANDARD;      PRT;    28 AA.
AC   P84488;
DT   30-AUG-2005, integrated into UniProtKB/Swiss-Prot.
DT   29-MAR-2005, sequence version 1.
DT   18-APR-2006, entry version 9.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Macaca mulatta (Rhesus macaque).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;
OC   Catarrhini; Cercopithecidae; Cercopithecinae; Macaca.
OX   NCBI_TaxID=9544;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RA   Yu J.-H., Xin Y., Eng J., Yalow R.S.;
RT   "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RT   sequences.";
RL   Regul. Pept. 32:39-45(1991).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   PIR; B60071; B60071.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043942.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;
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SCORE Search

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This page gives you Search Results detail for the Application 10500680 and Search Result 20070711_172433_us-1

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OM protein - protein search, using sw model

Run on:         July 12, 2007, 07:35:23 ; Search time 31 Seconds
                                          (without alignments)
                                          96.217 Million cell updates/sec

Title:          US-10-500-680-1
Perfect score:  159
Sequence:       1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table:  BLOSUM62
                Gapop 10.0 , Gapext 0.5

Searched:       283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters:      283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       PIR_80:*
                1:  pir1:*
                2:  pir2:*
                3:  pir3:*
                4:  pir4:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES
```

Result No.	Score	% Query Match	Length	DB	ID	Description
1	123	77.4	28	2	B60071	vasoactive intesti
2	123	77.4	28	2	A60304	vasoactive intesti
3	123	77.4	55	1	VRBO	vasoactive intesti
4	123	77.4	55	1	VRRB	vasoactive intesti
5	123	77.4	55	1	VRSH	vasoactive intesti
6	123	77.4	58	1	VRPG	vasoactive intesti
7	123	77.4	145	2	A60038	vasoactive intesti
8	123	77.4	170	1	VRHU	vasoactive intesti
9	123	77.4	170	1	VRRT	vasoactive intesti
10	123	77.4	170	2	A60037	vasoactive intesti
11	112	70.4	55	1	VRGP	vasoactive intesti

12	111	69.8	25	2	JQ0361	vasoactive intesti
13	110	69.2	38	2	A49165	pituitary adenylat
14	110	69.2	165	1	VRCH	vasoactive intesti
15	110	69.2	173	2	S34767	neuropeptides prec
16	110	69.2	175	2	A37786	pituitary adenylat
17	110	69.2	176	2	I84638	pituitary adenylat
18	110	69.2	176	2	A34044	pituitary adenylat
19	109	68.6	28	2	A60303	vasoactive intesti
20	107	67.3	28	2	A38232	vasoactive intesti
21	107	67.3	195	2	I50456	pituitary adenylat
22	104	65.4	38	2	A61070	pituitary adenylat
23	95	59.7	27	2	A61071	pituitary adenylat
24	81	50.9	103	2	A41410	somatoliberin prec
25	79	49.7	35	1	HWGHD	exendin-2 - Gila m
26	74	46.5	38	1	HWGHS	exendin-1 - Mexica
27	73	45.9	104	2	A32731	somatoliberin prec
28	72	45.3	44	1	RHBOS	somatoliberin - bo
29	67	42.1	44	1	RHPG	somatoliberin - pi
30	67	42.1	108	1	RHHUS	somatoliberin prec
31	63	39.6	27	1	SECH	secretin - chicken
32	61	38.4	31	2	S44472	glucagon G2 - Nort
33	61	38.4	131	1	SEPG	secretin precursor
34	59	37.1	31	2	S44471	glucagon G1 - Nort
35	58	36.5	133	2	JC2202	secretin precursor
36	58	36.5	443	2	C70392	gamma-glutamyl pho
37	57	35.8	134	2	A40959	secretin precursor
38	55	34.6	27	2	A27267	secretin - dog
39	53	33.3	27	1	S07443	secretin - human
40	53	33.3	27	1	SEBO	secretin - bovine
41	53	33.3	27	1	SESH	secretin - sheep
42	53	33.3	206	2	I51301	proglucagon - chic
43	52.5	33.0	230	2	T19364	hypothetical prote
44	52	32.7	38	1	GCFIK	glucagon-like pept
45	52	32.7	418	2	A97300	gamma-glutamyl pho

ALIGNMENTS

```
RESULT 1
B60071
vasoactive intestinal peptide - rhesus macaque
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C;Accession: B60071
R;Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A;Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A;Reference number: A60071; MUID:91164506; PMID:2003150
A;Accession: B60071
A;Status: protein sequence not shown
A;Molecule type: protein
A;Residues: 1-28 <YUA>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Note: the sequence is identical with the human sequence
C;Superfamily: glucagon
C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

  Query Match             77.4%;  Score 123;  DB 2;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 2e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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```
RESULT 2
A60304
vasoactive intestinal peptide - dog
N;Alternate names: VIP
C;Species: Canis lupus familiaris (dog)
C;Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C;Accession: A60304
R;Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A;Title: Purification and sequencing of dog and guinea pig VIP's.
A;Reference number: A60304
A;Accession: A60304
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C;Superfamily: glucagon
C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

  Query Match             77.4%;  Score 123;  DB 2;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 2e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 3
VRBO
vasoactive intestinal peptide precursor - bovine (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Bos primigenius taurus (cattle)
C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
C;Accession: A61643; A61644; S09689
R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Rel
A;Reference number: A61643; MUID:85027215; PMID:6548446
A;Accession: A61643
A;Molecule type: protein
A;Residues: 1-27 <CAR>
A;Cross-references: UNIPARC:UPI0000173515
R;Carlquist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A;Reference number: A61644; MUID:80092152; PMID:520589
A;Accession: A61644
A;Molecule type: protein
A;Residues: 28-55 <CA2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.; Vanderme
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine is
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

  Query Match             77.4%;  Score 123;  DB 1;  Length 55;
```



```
  Best Local Similarity   85.7%;  Pred. No. 3.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db         28 HSDAVFTDNYTRLRKQMAVKKYLNSILN 55


RESULT 4
VRRB
vasoactive intestinal peptide precursor - rabbit (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
C;Accession: B60415; A60415
R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, P.; Vanderme
Peptides 11, 123-128, 1990
A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A;Reference number: A60415; MUID:90259845; PMID:2342988
A;Accession: B60415
A;Molecule type: protein
A;Residues: 1-27 <GOS>
A;Cross-references: UNIPARC:UPI00000351DB
A;Accession: A60415
A;Molecule type: protein
A;Residues: 28-55 <GO2>
A;Cross-references: UNIPARC:UPI00000351DB
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

  Query Match             77.4%;  Score 123;  DB 1;  Length 55;
  Best Local Similarity   85.7%;  Pred. No. 3.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db         28 HSDAVFTDNYTRLRKQMAVKKYLNSILN 55


RESULT 5
VRSH
vasoactive intestinal peptide precursor - sheep (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: B60072; A60072; C61063; A43974
R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine is
A;Reference number: A60072; MUID:91239834; PMID:2034821
A;Accession: B60072
A;Molecule type: protein
A;Residues: 1-27 <BOU>
A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A;Accession: A60072
A;Molecule type: protein
A;Residues: 28-55 <BO2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreactivity in ovi
```

SCORE Search Results Details for Application 10500680 and Search Result 20070711_172430_us-10-500-680-1.rag.

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```
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OM protein - protein search, using sw model

Run on:         July 12, 2007, 07:24:46 ; Search time 259 Seconds
                                          (without alignments)
                                          58.569 Million cell updates/sec

Title:          US-10-500-680-1
Perfect score:  159
Sequence:       1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table:  BLOSUM62
                Gapop 10.0 , Gapext 0.5

Searched:       2782304 seqs, 489333398 residues

Total number of hits satisfying chosen parameters:      2782304

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :        A_Geneseq_200701:*
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                2:  geneseqp1990s:*
                3:  geneseqp2000s:*
                4:  geneseqp2001s:*
                5:  geneseqp2002s:*
                6:  geneseqp2003as:*
                7:  geneseqp2003bs:*
                8:  geneseqp2004s:*
                9:  geneseqp2005s:*
                10:  geneseqp2006s:*
                11:  geneseqp2007s:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES

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Result           Query
  No.    Score  Match Length DB  ID                      Description
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1	159	100.0	31	4	AAG70527	Aag70527 Insulin s
2	159	100.0	31	8	ADB99395	Adb99395 Human pit
3	159	100.0	31	9	ADV90879	Adv90879 Glucagon-
4	159	100.0	31	9	ADY40394	Ady40394 Glucose-d
5	159	100.0	31	9	AEE62501	Aee62501 VPAC2-rec
6	159	100.0	31	9	AEE35467	Aee35467 VPAC2 rec
7	159	100.0	31	10	AEE33009	Aee33009 Insulin r
8	159	100.0	31	10	AEG10440	Aeg10440 PEGylated
9	159	100.0	31	10	AEG28505	Aeg28505 PEGylated
10	159	100.0	31	10	AEH24668	Aeh24668 VIP analo
11	159	100.0	32	9	AEE62223	Aee62223 VPAC2-rec
12	159	100.0	32	10	AEG10072	Aeg10072 PEGylated
13	159	100.0	32	10	AEG10365	Aeg10365 PEGylated
14	159	100.0	40	4	AAG70628	Aag70628 Insulin s
15	159	100.0	40	9	ADV90980	Adv90980 Glucagon-
16	159	100.0	40	9	ADY40496	Ady40496 Glucose-d
17	159	100.0	40	9	AEE62599	Aee62599 VPAC2-rec
18	159	100.0	40	9	AEE35565	Aee35565 VPAC2 rec
19	159	100.0	40	10	AEE33111	Aee33111 Insulin r
20	159	100.0	40	10	AEG10538	Aeg10538 PEGylated
21	159	100.0	40	10	AEG28603	Aeg28603 PEGylated
22	159	100.0	42	9	AEE62366	Aee62366 VPAC2-rec
23	159	100.0	42	9	AEE62365	Aee62365 VPAC2-rec
24	159	100.0	42	9	AEE62205	Aee62205 VPAC2-rec
25	159	100.0	42	9	AEE62221	Aee62221 VPAC2-rec
26	159	100.0	42	9	AEE62287	Aee62287 VPAC2-rec
27	159	100.0	42	9	AEE62353	Aee62353 VPAC2-rec
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45	159	100.0	42	10	AEG10738	Aeg10738 PEGylated

ALIGNMENTS

```
RESULT 1
AAG70527
ID   AAG70527 standard; peptide; 31 AA.
XX
AC   AAG70527;
XX
DT   13-JUL-2001  (first entry)
XX
DE   Insulin secretagogue peptide R3P66.
XX
KW   Pituitary adenylate cyclase activating peptide; PACAP;
KW   insulin secretagogue peptide; antidiabetic; antiasthmatic; hypotensive;
KW   cardiant; antiulcer; respiratory disease; diabetes; glucose intolerance;
KW   asthma; male fertility; gene therapy; cardiovascular disease; ulcer;
```

```
KW   PACAP receptor 3; R3; agonist.
XX
OS   Synthetic.
XX
PN   WO200123420-A2.
XX
PD   05-APR-2001.
XX
PF   27-SEP-2000; 2000WO-US026638.
XX
PR   28-SEP-1999;   99US-00407832.
PR   15-JUN-2000; 2000US-00595280.
XX
PA   (FARB ) BAYER CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2001-367200/38.
XX
PT   Novel pituitary adenylate cyclase activating peptide receptor 3 agonist
PT   useful for treating type 2 diabetes, asthma, hypertension, ulcers and
PT   cardiovascular diseases.
XX
PS   Claim 1; Fig 1; 62pp; English.
XX
CC   The present sequence is one of a large number of novel pituitary
CC   adenylate cyclase activating peptide (PACAP) receptor 3 (R3) agonist
CC   polypeptides. The polypeptides stimulate insulin release from pancreatic
CC   beta cells. They are useful for treating metabolic disorders such as type
CC   2 diabetes and the pre-diabetic state of impaired glucose tolerance. They
CC   are useful for treating respiratory diseases and for stimulating insulin
CC   release in a glucose-dependent manner. The R3 agonists are useful for
CC   treating and/or preventing diseases and conditions such as diabetes,
CC   asthma, hypertension, male reproduction problems including human sperm
CC   motility, cardiovascular diseases and ulcers. They are useful in gene
CC   therapy
XX
SQ   Sequence 31 AA;

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  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 2
ADB99395
ID   ADB99395 standard; peptide; 31 AA.
XX
AC   ADB99395;
XX
DT   26-FEB-2004  (first entry)
XX
DE   Human pituitary adenylate cyclase-activating polypeptide (PACAP) 66.
XX
KW   peptide formulation;
KW   pituitary adenylate cyclase-activating polypeptide 66; PACAP 66;
KW   therapeutic peptide; peptide aggregation; chemical degradation;
KW   peptide stabiliser; peptide storage; PACAP; peptide hormone;
KW   insulin secretion; peptide stability; type II diabetes; obesity;
KW   lipid disorder; hypertension; antidiabetic; hypotensive; anorectic;
KW   human.
```



```
XX
OS   Unidentified.
OS   Homo sapiens.
XX
PN   WO2003068805-A2.
XX
PD   21-AUG-2003.
XX
PF   14-FEB-2003; 2003WO-US004790.
XX
PR   14-FEB-2002; 2002US-0356915P.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Wang W,  Wang YJ,  Martin-Moe S;
XX
DR   WPI; 2004-122114/12.
XX
PT   Peptide formulation useful in the treatment of diabetes and related
PT   disorders e.g. obesity and hypertension comprises peptide containing at
PT   least one histidine residue, transition metal salt and organic solvent.
XX
PS   Claim 3; Page 2; 16pp; English.
XX
CC   This invention relates to a novel stabilised peptide formulation in
CC   solution or suspension, in particular pituitary adenylate cyclase-
CC   activating polypeptide (PACAP) 66. Therapeutic peptides are susceptible
CC   to aggregation and/or chemical degradation when stored in an aqueous
CC   solution for extended periods of time. Two often-used strategies to
CC   combat this problem are formulate the peptides with a stabiliser or to
CC   dry the peptide for long term storage. PACAP is a member of a superfamily
CC   of peptide hormones and, by binding to different receptors, it induces a
CC   variety of pharmacological activities including stimulation of insulin
CC   secretion. The current invention describes a novel peptide analogue of
CC   PACAP, PACAP 66, which was found to have far greater stability than an
CC   average peptide. This peptide may be useful for the treatment of type II
CC   diabetes and related conditions (for example obesity, lipid disorder
CC   and/or hypertension) and it may have antidiabetic, hypotensive and
CC   anorectic activities. The present sequence is the amino acid sequence of
CC   the PACAP 66 peptide of the invention.
XX
SQ   Sequence 31 AA;

  Query Match           100.0%;  Score 159;  DB 8;  Length 31;
  Best Local Similarity  100.0%;  Pred. No. 7.1e-14;
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              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 3
ADV90879
ID   ADV90879 standard; peptide; 31 AA.
XX
AC   ADV90879;
XX
DT   24-MAR-2005  (first entry)
XX
DE   Glucagon-like peptide (GLP) 1 receptor agonist seqid 72.
XX
KW   antiarthritic; virucide; fungicide; antiinflammatory;
KW   cardiovascular-gen.; antiasthmatic; pharmaceutical; polymer; arthritis;
KW   viral infection; fungal infection; inflammation; asthma;
```

```
KW   cardiovascular disease; GLP-1 receptor; insulin;
KW   glucagon-like peptide receptor; agonist.
XX
OS   Unidentified.
XX
PN   WO2005000360-A2.
XX
PD   06-JAN-2005.
XX
PF   21-MAY-2004; 2004WO-US016212.
XX
PR   23-MAY-2003; 2003US-0473213P.
XX
PA   (NEKT-) NEKTAR THERAPEUTICS AL CORP.
XX
PI   Harris JM,  Kozlowski A,  Mcmanus SP,  Bentley MD,  Charles SA;
XX
DR   WPI; 2005-101234/11.
XX
PT   Polymeric reagent for preparing conjugate used for pharmaceutical
PT   preparations, comprises a carbamate or urethane group positioned between
PT   water-soluble polymer and reactive groups.
XX
PS   Example 9; SEQ ID NO 72; 113pp; English.
XX
CC   The invention describes a polymeric reagent comprising a carbamate or
CC   urethane group (I) positioned between a water-soluble polymer and a
CC   reactive group. The nitrogen atom in the carbamate or urethane group is
CC   proximal to the water-soluble polymer. The carbonyl carbon atom of the
CC   carbamate or urethane group is proximal to the reactive group. Also
CC   described are: preparing the polymeric reagent; preparing the conjugate;
CC   a pharmaceutical preparation comprising the conjugate in combination with
CC   a pharmaceutical excipient; delivering the conjugate; and a polymer
CC   comprising a water-soluble polymer, carbamate or urethane group, and a
CC   reactive group, the water-soluble polymer is linked to the nitrogen atom
CC   of carbamate or urethane group through either direct covalent bond or
CC   primary spacer group, the reactive group is linked to the carbonyl carbon
CC   atom of carbamate or urethane group through either direct covalent bond
CC   or secondary spacer group. The reagent is useful for preparing a
CC   conjugate used in the pharmaceutical preparation and for treating
CC   diseases such as arthritis, viral infections, fungal infections,
CC   inflammatory disorders, asthma and cardiovascular disorders. The
CC   polymeric reagent provides a unique series of atoms to provide customized
CC   degradation rates. This is the amino acid sequence of a GLP-1 receptor
CC   agonist useful in the creation of conjugates of the invention useful in
CC   regulating insulin production.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 4
ADY40394
ID   ADY40394 standard; peptide; 31 AA.
XX
AC   ADY40394;
XX
DT   05-MAY-2005  (first entry)
```



```
XX
DE   Glucose-dependent insulin release peptide, R3P66.
XX
KW   adenylate cyclase; gene therapy; metabolic disorder;
KW   non-insulin dependent diabetes; impaired glucose tolerance;
KW   respiratory-gen.; metabolic; antidiabetic; respiratory disease.
XX
OS   Synthetic.
XX
PN   US2005043237-A1.
XX
PD   24-FEB-2005.
XX
PF   15-JUL-2004; 2004US-00892981.
XX
PR   27-SEP-2000; 2000US-00671773.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2005-180830/19.
XX
PT   New pituitary adenylate cyclase activating peptide (PACAP) polypeptide,
PT   useful for stimulating the release of insulin from pancreatic beta cells
PT   in a glucose-dependent manner, thus treating metabolic disorder e.g.
PT   diabetes.
XX
PS   Claim 1; SEQ ID NO 72; 123pp; English.
XX
CC   The invention relates to a novel pituitary adenylate cyclase activating
CC   peptide (PACAP) polypeptide selected from any one of 188 fully defined
CC   sequences given in the specification, and their functionally equivalent
CC   fragments, derivatives and variants. The invention further comprises: a
CC   polynucleotide encoding a polypeptide sequence above or its degenerate
CC   variant; a vector comprising the polynucleotide; a host cell comprising a
CC   vector; a method for producing the polypeptide; a pharmaceutical
CC   composition comprising the polypeptide in combination with a
CC   pharmaceutical carrier; a gene therapy composition comprising the
CC   polynucleotide in combination with a therapeutic gene therapy vector; a
CC   purified antibody which binds specifically to the polypeptide; a
CC   vasoactive intestinal peptide variant having one of the structures given
CC   in the specification and their functional equivalents; and a method for
CC   stimulating insulin release in a glucose-dependent manner in a mammal. An
CC   agonist of the PACAP R3 polypeptide is useful for treating a metabolic
CC   disorder e.g., type 2 diabetes or pre-diabetic state of impaired glucose
CC   tolerance in a mammal and has respiratory-gen., metabolic, and
CC   antidiabetic activities. The polypeptide is useful for treating
CC   respiratory diseases. The polypeptide is useful for stimulating the
CC   release of insulin from pancreatic beta cells in a glucose-dependent
CC   manner, thus treating metabolic disorder such as diabetes or impaired
CC   glucose tolerance, a prediabetic state. This sequence represents a
CC   peptide capable of stimulating insulin release in a glucose-dependent
CC   fashion of the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

```
RESULT 5
AEE62501
ID   AEE62501 standard; peptide; 31 AA.
XX
AC   AEE62501;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2-receptor peptide agonist SEQ ID NO 324.
XX
KW   VPAC2 receptor; VPAC2 receptor agonist; antidiabetic; immunosuppressive;
KW   antiarteriosclerotic; cardiovascular-gen.; antiasthmatic;
KW   antiinflammatory; antirheumatic; antiarthritic; diabetes mellitus;
KW   non-insulin-dependent diabetes; insulin-dependent diabetes;
KW   endocrine disease; gastrointestinal disease; nutritional disorder;
KW   obesity; cardiovascular disease; atherosclerosis; respiratory disease;
KW   asthma; autoimmune disorder; inflammation; rheumatoid arthritis.
XX
OS   Synthetic.
XX
PN   WO2005113594-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017435.
XX
PR   21-MAY-2004; 2004US-0573739P.
PR   12-NOV-2004; 2004US-0627880P.
PR   25-FEB-2005; 2005US-0656601P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812225/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for treating diseases, e.g.
PT   diabetes, obesity, atherosclerosis, cardiovascular disease, asthma,
PT   autoimmune diseases, inflammatory diseases, or rheumatoid arthritis.
XX
PS   Disclosure; SEQ ID NO 324; 400pp; English.
XX
CC   This invention describes novel VPAC2 receptor peptide agonists which have
CC   antidiabetic, immunosuppressive, antiarteriosclerotic, cardiovascular,
CC   antiasthmatic, antiinflammatory, antirheumatic and antiarthritic
CC   activity. The novel agonists may contain an N-terminal modifications e.g.
CC   the addition of a group selected from: acetyl, propionyl, butyryl,
CC   pentanoyl, hexanoyl, methionine, methionine sulfoxide, 3-phenylpropionyl,
CC   phenylacetyl, benzoyl, norleucine, D-histidine, isoleucine, or 3-
CC   mercaptopropionyl. The agonist is used as a medicament, or is useful for
CC   manufacturing a medicament for use in the treatment of non-insulin- or
CC   insulin-dependent diabetes or for the treatment of other diseases, e.g.
CC   obesity, atherosclerosis, asthma, cardiovascular disease, autoimmune
CC   diseases, inflammatory diseases, or rheumatoid arthritis. This sequence
CC   represents a VPAC2 receptor peptide agonist used in the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
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```
                 ||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 6
AEE35467
ID   AEE35467 standard; peptide; 31 AA.
XX
AC   AEE35467;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2 receptor peptide agonist, SEQ ID NO: 58.
XX
KW   VPAC2 receptor agonist; G protein coupled receptor;
KW   non-insulin dependent diabetes; antidiabetic; pharmaceutical;
KW   insulin dependent diabetes.
XX
OS   Synthetic.
XX
PN   WO2005113593-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017434.
XX
PR   21-MAY-2004; 2004US-0573080P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812224/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for the manufacture of a
PT   medicament for treating or insulin-dependent or non-insulin-dependent
PT   diabetes.
XX
PS   Disclosure; SEQ ID NO 58; 217pp; English.
XX
CC   The invention relates to a VPAC2 receptor peptide agonist comprising a
CC   sequence of the formulae given in the specification, optionally including
CC   a C-terminal extension and an N-terminal modification. The VPAC2 receptor
CC   peptide agonist is useful for the manufacture of a medicament for
CC   treating or insulin-dependent or non-insulin-dependent diabetes. The
CC   present sequence represents a VPAC2 receptor agonist peptide of the
CC   invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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              ||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 7
AEE33009
ID   AEE33009 standard; peptide; 31 AA.
XX
AC   AEE33009;
```

```
XX
DT   09-FEB-2006  (first entry)
XX
DE   Insulin release stimulating peptide, R3P66, SEQ ID 72.
XX
KW   Antidiabetic; pituitary adenylate cyclase activating peptide receptor 3;
KW   diabetes; impaired glucose tolerance.
XX
OS   Unidentified.
XX
PN   US6972319-B1.
XX
PD   06-DEC-2005.
XX
PF   27-SEP-2000; 2000US-00671773.
XX
PR   28-SEP-1999;   99US-0240954P.
PR   15-JUN-2000; 2000US-0327556P.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2006-007570/01.
XX
PT   New pituitary adenylate cyclase activating peptide (PACAP) receptor 3
PT   agonist polypeptide, useful in preparing a pharmaceutical composition for
PT   treating diabetes or impaired glucose tolerance in a mammal.
XX
PS   Claim 1; SEQ ID NO 72; 121pp; English.
XX
CC   The invention relates to a novel pituitary adenylate cyclase activating
CC   peptide (PACAP) receptor 3 agonist. The invention further includes a
CC   pharmaceutical composition comprising the polypeptide and a carrier; a
CC   method for treating diabetes or impaired glucose tolerance in a mammal;
CC   and a method for stimulating insulin release in a glucose-dependent
CC   manner in a mammal. The polypeptide is useful in preparing a
CC   pharmaceutical composition for treating diabetes or impaired glucose
CC   tolerance in a mammal. This sequence represents an insulin release
CC   stimulating polypeptide used in the method of the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 8
AEG10440
ID   AEG10440 standard; peptide; 31 AA.
XX
AC   AEG10440;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #417.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
```



```
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 417; 496pp; English.
XX
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 9
AEG28505
ID   AEG28505 standard; peptide; 31 AA.
XX
```

```
AC   AEG28505;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist SEQ ID NO 81.
XX
KW   antidiabetic; immunosuppressive; antiarteriosclerotic; hypotensive;
KW   antilipemic; gynecological; antiasthmatic; protein interaction;
KW   therapeutic; non-insulin dependent diabetes; insulin dependent diabetes;
KW   atherosclerosis; hyperlipidemia; hypertension; cardiovascular disease;
KW   polycystic ovary syndrome; antiinfertility; endocrine disease;
KW   gynecology and obstetrics; asthma; inflammation; respiratory disease;
KW   diabetes; autoimmune disease; immune disorder; endocrine disease;
KW   gastrointestinal disease; metabolic disorder.
XX
OS   Synthetic.
XX
PN   WO2006023358-A1.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028531.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212281/22.
XX
PT   Novel polyethylene glycosylated (PEGylated) vasoactive intestinal peptide
PT   (VIP)-shared type 2 (VPAC2) receptor peptide agonist, useful as
PT   medicament for treating non-insulin- or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 81; 236pp; English.
XX
CC   The invention describes a polyethylene glycosylated (PEGylated)
CC   vasoactive intestinal peptide (VIP)-shared type 2 (VPAC2) receptor
CC   peptide agonist (I) comprising a specific amino acid sequence. (I) is
CC   useful as a medicament or for the manufacture of a medicament for the
CC   treatment of non-insulin-dependent diabetes or insulin-dependent
CC   diabetes. (I) is useful for preventing or treating disorders such as
CC   atherosclerotic disease, hyperlipidemia, hypertension, polycystic ovary
CC   syndrome, asthma, autoimmune disease. (I) has enhanced selectivity,
CC   potency and/or stability, extended half-life and reduced clearance. This
CC   is the amino acid sequence of a PEGylated VPAC2 receptor peptide agonist.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 10
AEH24668
ID   AEH24668 standard; peptide; 31 AA.
XX
AC   AEH24668;
```



```
XX
DT   15-JUN-2006  (first entry)
XX
DE   VIP analog VPAC2 sel Bayer, SEQ ID NO:36 #2.
XX
KW   Pharmaceutical; hyperglycemia; insulin resistance; diabetes;
KW   non-insulin dependent diabetes; antidiabetic; obesity; anorectic;
KW   metabolic acidosis; vasotropic; metabolic;
KW   vasoactive intestinal polypeptide analog; VIP analog.
XX
OS   Synthetic.
XX
PN   US2006079456-A1.
XX
PD   13-APR-2006.
XX
PF   07-OCT-2005; 2005US-00245499.
XX
PR   08-OCT-2004; 2004US-0617500P.
XX
PA   (THER-) THERAPEI PHARM INC.
XX
PI   Nestor J;
XX
DR   WPI; 2006-292473/30.
XX
PT   New vasoactive intestinal polypeptide, useful for treating elevated blood
PT   glucose levels, diabetes, preferably Type II diabetes mellitus, obesity
PT   and insulin resistance.
XX
PS   Claim 1; SEQ ID NO 36; 19pp; English.
XX
CC   The invention relates to vasoactive intestinal polypeptide (VIP) analogs
CC   of the generic sequence shown in AEH24660, AEH24661 or AEH24662, or which
CC   have a specific sequence chosen from SEQ ID NO:1-38 (AEH24616-AEH24653
CC   and AEH24663-AEH24670). The C-termini of polypeptides of the invention
CC   comprise amino acid residues which form an amphipathic alpha-helix. The
CC   invention also relates to recombinant or synthetic methods for producing
CC   a polypeptide of the invention; expression vectors and host cells for the
CC   recombinant production of a polypeptide of the invention; and
CC   pharmaceutical compositions comprising a polypeptide of the invention or
CC   an acceptable salt thereof, and a carrier or excipient. The
CC   pharmaceutical composition optionally further comprises at least one
CC   compound selected from insulin, incretin, glucagon-like peptide (GLP-1),
CC   exendin and analogs thereof, sulfonylureas, biguanides, alpha-glucosidase
CC   inhibitors, thiazolidinediones, peroxisome proliferator activated
CC   receptor (PPAR) agonists, PPAR antagonists and PPAR partial agonists. The
CC   polypeptides of the invention stimulate glucose-dependent insulin
CC   secretion and have an enhanced duration of action. The polypeptides, and
CC   pharmaceutical compositions comprising them are useful in the treatment
CC   of elevated blood glucose levels, diabetes (preferably type 2 diabetes),
CC   insulin resistance, obesity and metabolic acidosis. The present sequence
CC   represents a vasoactive intestinal polypeptide analog, VPAC2 sel Bayer,
CC   which appears to be claimed as a vasoactive intestinal polypeptide analog
CC   of the invention. Note: The present sequence differs from the vasoactive
CC   intestinal polypeptide analog also referred to as SEQ ID NO:36 (AEH24651)
CC   shown in Figure 1.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

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                ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 11
AEE62223
ID   AEE62223 standard; peptide; 32 AA.
XX
AC   AEE62223;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2-receptor peptide agonist SEQ ID NO 46.
XX
KW   VPAC2 receptor; VPAC2 receptor agonist; antidiabetic; immunosuppressive;
KW   antiarteriosclerotic; cardiovascular-gen.; antiasthmatic;
KW   antiinflammatory; antirheumatic; antiarthritic; diabetes mellitus;
KW   non-insulin-dependent diabetes; insulin-dependent diabetes;
KW   endocrine disease; gastrointestinal disease; nutritional disorder;
KW   obesity; cardiovascular disease; atherosclerosis; respiratory disease;
KW   asthma; autoimmune disorder; inflammation; rheumatoid arthritis.
XX
OS   Synthetic.
XX
PN   WO2005113594-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017435.
XX
PR   21-MAY-2004; 2004US-0573739P.
PR   12-NOV-2004; 2004US-0627880P.
PR   25-FEB-2005; 2005US-0656601P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK, .Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812225/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for treating diseases, e.g.
PT   diabetes, obesity, atherosclerosis, cardiovascular disease, asthma,
PT   autoimmune diseases, inflammatory diseases, or rheumatoid arthritis.
XX
PS   Claim 29; SEQ ID NO 46; 400pp; English.
XX
CC   This invention describes novel VPAC2 receptor peptide agonists which have
CC   antidiabetic, immunosuppressive, antiarteriosclerotic, cardiovascular,
CC   antiasthmatic, antiinflammatory, antirheumatic and antiarthritic
CC   activity. The novel agonists may contain an N-terminal modifications e.g.
CC   the addition of a group selected from: acetyl, propionyl, butyryl,
CC   pentanoyl, hexanoyl, methionine, methionine sulfoxide, 3-phenylpropionyl,
CC   phenylacetyl, benzoyl, norleucine, D-histidine, isoleucine, or 3-
CC   mercaptopropionyl. The agonist is used as a medicament, or is useful for
CC   manufacturing a medicament for use in the treatment of non-insulin- or
CC   insulin-dependent diabetes or for the treatment of other diseases, e.g.
CC   obesity, atherosclerosis, asthma, cardiovascular disease, autoimmune
CC   diseases, inflammatory diseases, or rheumatoid arthritis. This sequence
CC   represents a VPAC2 receptor peptide agonist used in the invention.
XX
SQ   Sequence 32 AA;

  Query Match           100.0%;  Score 159;  DB 9;  Length 32;
  Best Local Similarity  100.0%;  Pred. No. 7.4e-14;
```



```
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 12
AEG10072
ID   AEG10072 standard; peptide; 32 AA.
XX
AC   AEG10072;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #49.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 49; 496pp; English.
XX
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
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CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 32 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 32;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 13
AEG10365
ID   AEG10365 standard; peptide; 32 AA.
XX
AC   AEG10365;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #342.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Claim 41; SEQ ID NO 342; 496pp; English.
XX
```



```
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 32 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 32;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 14
AAG70628
ID   AAG70628 standard; peptide; 40 AA.
XX
AC   AAG70628;
XX
DT   13-JUL-2001  (first entry)
XX
DE   Insulin secretagogue peptide R3P172.
XX
KW   Pituitary adenylate cyclase activating peptide; PACAP;
KW   insulin secretagogue peptide; antidiabetic; antiasthmatic; hypotensive;
KW   cardiant; antiulcer; respiratory disease; diabetes; glucose intolerance;
KW   asthma; male fertility; gene therapy; cardiovascular disease; ulcer;
KW   PACAP receptor 3; R3; agonist.
XX
OS   Synthetic.
XX
PN   WO200123420-A2.
XX
PD   05-APR-2001.
XX
PF   27-SEP-2000; 2000WO-US026638.
XX
PR   28-SEP-1999;   99US-00407832.
PR   15-JUN-2000; 2000US-00595280.
XX
PA   (FARB ) BAYER CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2001-367200/38.
XX
PT   Novel pituitary adenylate cyclase activating peptide receptor 3 agonist
PT   useful for treating type 2 diabetes, asthma, hypertension, ulcers and
PT   cardiovascular diseases.
XX
PS   Claim 1; Fig 1; 62pp; English.
XX
CC   The present sequence is one of a large number of novel pituitary
```

```
CC   adenylate cyclase activating peptide (PACAP) receptor 3 (R3) agonist
CC   polypeptides. The polypeptides stimulate insulin release from pancreatic
CC   beta cells. They are useful for treating metabolic disorders such as type
CC   2 diabetes and the pre-diabetic state of impaired glucose tolerance. They
CC   are useful for treating respiratory diseases and for stimulating insulin
CC   release in a glucose-dependent manner. The R3 agonists are useful for
CC   treating and/or preventing diseases and conditions such as diabetes,
CC   asthma, hypertension, male reproduction problems including human sperm
CC   motility, cardiovascular diseases and ulcers. They are useful in gene
CC   therapy
XX
SQ   Sequence 40 AA;

  Query Match             100.0%;  Score 159;  DB 4;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 9.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 15
ADV90980
ID   ADV90980 standard; peptide; 40 AA.
XX
AC   ADV90980;
XX
DT   24-MAR-2005  (first entry)
XX
DE   Glucagon-like peptide (GLP) 1 receptor agonist seqid 174.
XX
KW   antiarthritic; virucide; fungicide; antiinflammatory;
KW   cardiovascular-gen.; antiasthmatic; pharmaceutical; polymer; arthritis;
KW   viral infection; fungal infection; inflammation; asthma;
KW   cardiovascular disease; GLP-1 receptor; insulin;
KW   glucagon-like peptide receptor; agonist.
XX
OS   Unidentified.
XX
PN   WO2005000360-A2.
XX
PD   06-JAN-2005.
XX
PF   21-MAY-2004; 2004WO-US016212.
XX
PR   23-MAY-2003; 2003US-0473213P.
XX
PA   (NEKT-) NEKTAR THERAPEUTICS AL CORP.
XX
PI   Harris JM,  Kozlowski A,  Mcmanus SP,  Bentley MD,  Charles SA;
XX
DR   WPI; 2005-101234/11.
XX
PT   Polymeric reagent for preparing conjugate used for pharmaceutical
PT   preparations, comprises a carbamate or urethane group positioned between
PT   water-soluble polymer and reactive groups.
XX
PS   Example 9; SEQ ID NO 174; 113pp; English.
XX
CC   The invention describes a polymeric reagent comprising a carbamate or
CC   urethane group (I) positioned between a water-soluble polymer and a
CC   reactive group. The nitrogen atom in the carbamate or urethane group is
CC   proximal to the water-soluble polymer. The carbonyl carbon atom of the
CC   carbamate or urethane group is proximal to the reactive group. Also
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CC   described are: preparing the polymeric reagent; preparing the conjugate;
CC   a pharmaceutical preparation comprising the conjugate in combination with
CC   a pharmaceutical excipient; delivering the conjugate; and a polymer
CC   comprising a water-soluble polymer, carbamate or urethane group, and a
CC   reactive group, the water-soluble polymer is linked to the nitrogen atom
CC   of carbamate or urethane group through either direct covalent bond or
CC   primary spacer group, the reactive group is linked to the carbonyl carbon
CC   atom of carbamate or urethane group through either direct covalent bond
CC   or secondary spacer group. The reagent is useful for preparing a
CC   conjugate used in the pharmaceutical preparation and for treating
CC   diseases such as arthritis, viral infections, fungal infections,
CC   inflammatory disorders, asthma and cardiovascular disorders. The
CC   polymeric reagent provides a unique series of atoms to provide customized
CC   degradation rates. This is the amino acid sequence of a GLP-1 receptor
CC   agonist useful in the creation of conjugates of the invention useful in
CC   regulating insulin production.
XX
SQ   Sequence 40 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 9.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


Search completed: July 12, 2007, 07:29:06
Job time : 260 secs
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SCORE Search Results Details for Application 10500680 and Search Result 20070712_125228_us-10-500-680-1.rag.

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OM protein - protein search, using sw model

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                                          (without alignments)
                                          70.555 Million cell updates/sec

Title:          US-10-500-680-1
Perfect score:  159
Sequence:       1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table:  BLOSUM62
                Gapop 10.0 , Gapext 0.5

Searched:       2782304 seqs, 489333398 residues

Total number of hits satisfying chosen parameters:      2782304

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :        A_Geneseq_200701:*
                 1:  geneseqp1980s:*
                 2:  geneseqp1990s:*
                 3:  geneseqp2000s:*
                 4:  geneseqp2001s:*
                 5:  geneseqp2002s:*
                 6:  geneseqp2003as:*
                 7:  geneseqp2003bs:*
                 8:  geneseqp2004s:*
                 9:  geneseqp2005s:*
                 10:  geneseqp2006s:*
                 11:  geneseqp2007s:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES

                  %
Result            Query
  No.    Score    Match Length DB  ID                      Description
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1	159	100.0	31	4	AAG70527	Aag70527	Insulin s
2	159	100.0	31	8	ADB99395	Adb99395	Human pit
3	159	100.0	31	9	ADV90879	Adv90879	Glucagon-
4	159	100.0	31	9	ADY40394	Ady40394	Glucose-d
5	159	100.0	31	9	AEE62501	Aee62501	VPAC2-rec
6	159	100.0	31	9	AEE35467	Aee35467	VPAC2 rec
7	159	100.0	31	10	AEE33009	Aee33009	Insulin r
8	159	100.0	31	10	AEG10440	Aeg10440	PEGylated
9	159	100.0	31	10	AEG28505	Aeg28505	PEGylated
10	159	100.0	31	10	AEH24668	Aeh24668	VIP analo
11	159	100.0	32	9	AEE62223	Aee62223	VPAC2-rec
12	159	100.0	32	10	AEG10072	Aeg10072	PEGylated
13	159	100.0	32	10	AEG10365	Aeg10365	PEGylated
14	159	100.0	40	4	AAG70628	Aag70628	Insulin s
15	159	100.0	40	9	ADV90980	Adv90980	Glucagon-
16	159	100.0	40	9	ADY40496	Ady40496	Glucose-d
17	159	100.0	40	9	AEE62599	Aee62599	VPAC2-rec
18	159	100.0	40	9	AEE35565	Aee35565	VPAC2 rec
19	159	100.0	40	10	AEE33111	Aee33111	Insulin r
20	159	100.0	40	10	AEG10538	Aeg10538	PEGylated
21	159	100.0	40	10	AEG28603	Aeg28603	PEGylated
22	159	100.0	42	9	AEE62366	Aee62366	VPAC2-rec
23	159	100.0	42	9	AEE62365	Aee62365	VPAC2-rec
24	159	100.0	42	9	AEE62205	Aee62205	VPAC2-rec
25	159	100.0	42	9	AEE62221	Aee62221	VPAC2-rec
26	159	100.0	42	9	AEE62287	Aee62287	VPAC2-rec
27	159	100.0	42	9	AEE62353	Aee62353	VPAC2-rec
28	159	100.0	42	9	AEE62362	Aee62362	VPAC2-rec
29	159	100.0	42	9	AEE62796	Aee62796	VPAC2-rec
30	159	100.0	42	9	AEE62363	Aee62363	VPAC2-rec
31	159	100.0	42	9	AEE62229	Aee62229	VPAC2-rec
32	159	100.0	42	9	AEE62352	Aee62352	VPAC2-rec
33	159	100.0	42	9	AEE62361	Aee62361	VPAC2-rec
34	159	100.0	42	9	AEE62220	Aee62220	VPAC2-rec
35	159	100.0	42	9	AEE62258	Aee62258	VPAC2-rec
36	159	100.0	42	9	AEE62797	Aee62797	VPAC2-rec
37	159	100.0	42	10	AEG10078	Aeg10078	PEGylated
38	159	100.0	42	10	AEG10227	Aeg10227	PEGylated
39	159	100.0	42	10	AEG10366	Aeg10366	PEGylated
40	159	100.0	42	10	AEG10107	Aeg10107	PEGylated
41	159	100.0	42	10	AEG10069	Aeg10069	PEGylated
42	159	100.0	42	10	AEG10215	Aeg10215	PEGylated
43	159	100.0	42	10	AEG10226	Aeg10226	PEGylated
44	159	100.0	42	10	AEG10202	Aeg10202	PEGylated
45	159	100.0	42	10	AEG10738	Aeg10738	PEGylated

ALIGNMENTS

```
RESULT 1
AAG70527
ID   AAG70527 standard; peptide; 31 AA.
XX
AC   AAG70527;
XX
DT   13-JUL-2001  (first entry)
XX
DE   Insulin secretagogue peptide R3P66.
XX
KW   Pituitary adenylate cyclase activating peptide; PACAP;
KW   insulin secretagogue peptide; antidiabetic; antiasthmatic; hypotensive;
KW   cardiant; antiulcer; respiratory disease; diabetes; glucose intolerance;
KW   asthma; male fertility; gene therapy; cardiovascular disease; ulcer;
```

```
KW   PACAP receptor 3; R3; agonist.
XX
OS   Synthetic.
XX
PN   WO200123420-A2.
XX
PD   05-APR-2001.
XX
PF   27-SEP-2000; 2000WO-US026638.
XX
PR   28-SEP-1999;   99US-00407832.
PR   15-JUN-2000; 2000US-00595280.
XX
PA   (FARB ) BAYER CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2001-367200/38.
XX
PT   Novel pituitary adenylate cyclase activating peptide receptor 3 agonist
PT   useful for treating type 2 diabetes, asthma, hypertension, ulcers and
PT   cardiovascular diseases.
XX
PS   Claim 1; Fig 1; 62pp; English.
XX
CC   The present sequence is one of a large number of novel pituitary
CC   adenylate cyclase activating peptide (PACAP) receptor 3 (R3) agonist
CC   polypeptides. The polypeptides stimulate insulin release from pancreatic
CC   beta cells. They are useful for treating metabolic disorders such as type
CC   2 diabetes and the pre-diabetic state of impaired glucose tolerance. They
CC   are useful for treating respiratory diseases and for stimulating insulin
CC   release in a glucose-dependent manner. The R3 agonists are useful for
CC   treating and/or preventing diseases and conditions such as diabetes,
CC   asthma, hypertension, male reproduction problems including human sperm
CC   motility, cardiovascular diseases and ulcers. They are useful in gene
CC   therapy
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 4;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 2
ADB99395
ID   ADB99395 standard; peptide; 31 AA.
XX
AC   ADB99395;
XX
DT   26-FEB-2004  (first entry)
XX
DE   Human pituitary adenylate cyclase-activating polypeptide (PACAP) 66.
XX
KW   peptide formulation;
KW   pituitary adenylate cyclase-activating polypeptide 66; PACAP 66;
KW   therapeutic peptide; peptide aggregation; chemical degradation;
KW   peptide stabiliser; peptide storage; PACAP; peptide hormone;
KW   insulin secretion; peptide stability; type II diabetes; obesity;
KW   lipid disorder; hypertension; antidiabetic; hypotensive; anorectic;
KW   human.
```



```
XX
OS   Unidentified.
OS   Homo sapiens.
XX
PN   WO2003068805-A2.
XX
PD   21-AUG-2003.
XX
PF   14-FEB-2003; 2003WO-US004790.
XX
PR   14-FEB-2002; 2002US-0356915P.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Wang W,. Wang YJ,  Martin-Moe S;
XX
DR   WPI; 2004-122114/12.
XX
PT   Peptide formulation useful in the treatment of diabetes and related
PT   disorders e.g. obesity and hypertension comprises peptide containing at
PT   least one histidine residue, transition metal salt and organic solvent.
XX
PS   Claim 3; Page 2; 16pp; English.
XX
CC   This invention relates to a novel stabilised peptide formulation in
CC   solution or suspension, in particular pituitary adenylate cyclase-
CC   activating polypeptide (PACAP) 66. Therapeutic peptides are susceptible
CC   to aggregation and/or chemical degradation when stored in an aqueous
CC   solution for extended periods of time. Two often-used strategies to
CC   combat this problem are formulate the peptides with a stabiliser or to
CC   dry the peptide for long term storage. PACAP is a member of a superfamily
CC   of peptide hormones and, by binding to different receptors, it induces a
CC   variety of pharmacological activities including stimulation of insulin
CC   secretion. The current invention describes a novel peptide analogue of
CC   PACAP, PACAP 66, which was found to have far greater stability than an
CC   average peptide. This peptide may be useful for the treatment of type II
CC   diabetes and related conditions (for example obesity, lipid disorder
CC   and/or hypertension) and it may have antidiabetic, hypotensive and
CC   anorectic activities. The present sequence is the amino acid sequence of
CC   the PACAP 66 peptide of the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 8;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 3
ADV90879
ID   ADV90879 standard; peptide; 31 AA.
XX
AC   ADV90879;
XX
DT   24-MAR-2005  (first entry)
XX
DE   Glucagon-like peptide (GLP) 1 receptor agonist seqid 72.
XX
KW   antiarthritic; virucide; fungicide; antiinflammatory;
KW   cardiovascular-gen.; antiasthmatic; pharmaceutical; polymer; arthritis;
KW   viral infection; fungal infection; inflammation; asthma;
```

```
KW   cardiovascular disease; GLP-1 receptor; insulin;
KW   glucagon-like peptide receptor; agonist.
XX
OS   Unidentified.
XX
PN   WO2005000360-A2.
XX
PD   06-JAN-2005.
XX
PF   21-MAY-2004; 2004WO-US016212.
XX
PR   23-MAY-2003; 2003US-0473213P.
XX
PA   (NEKT-) NEKTAR THERAPEUTICS AL CORP.
XX
PI   Harris JM,  Kozlowski A,  Mcmanus SP,  Bentley MD,  Charles SA;
XX
DR   WPI; 2005-101234/11.
XX
PT   Polymeric reagent for preparing conjugate used for pharmaceutical
PT   preparations, comprises a carbamate or urethane group positioned between
PT   water-soluble polymer and reactive groups.
XX
PS   Example 9; SEQ ID NO 72; 113pp; English.
XX
CC   The invention describes a polymeric reagent comprising a carbamate or
CC   urethane group (I) positioned between a water-soluble polymer and a
CC   reactive group. The nitrogen atom in the carbamate or urethane group is
CC   proximal to the water-soluble polymer. The carbonyl carbon atom of the
CC   carbamate or urethane group is proximal to the reactive group. Also
CC   described are: preparing the polymeric reagent; preparing the conjugate;
CC   a pharmaceutical preparation comprising the conjugate in combination with
CC   a pharmaceutical excipient; delivering the conjugate; and a polymer
CC   comprising a water-soluble polymer, carbamate or urethane group, and a
CC   reactive group, the water-soluble polymer is linked to the nitrogen atom
CC   of carbamate or urethane group through either direct covalent bond or
CC   primary spacer group, the reactive group is linked to the carbonyl carbon
CC   atom of carbamate or urethane group through either direct covalent bond
CC   or secondary spacer group. The reagent is useful for preparing a
CC   conjugate used in the pharmaceutical preparation and for treating
CC   diseases such as arthritis, viral infections, fungal infections,
CC   inflammatory disorders, asthma and cardiovascular disorders. The
CC   polymeric reagent provides a unique series of atoms to provide customized
CC   degradation rates. This is the amino acid sequence of a GLP-1 receptor
CC   agonist useful in the creation of conjugates of the invention useful in
CC   regulating insulin production.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 4
ADY40394
ID   ADY40394 standard; peptide; 31 AA.
XX
AC   ADY40394;
XX
DT   05-MAY-2005  (first entry)
```



```
XX
DE   Glucose-dependent insulin release peptide, R3P66.
XX
KW   adenylate cyclase; gene therapy; metabolic disorder;
KW   non-insulin dependent diabetes; impaired glucose tolerance;
KW   respiratory-gen.; metabolic; antidiabetic; respiratory disease.
XX
OS   Synthetic.
XX
PN   US2005043237-A1.
XX
PD   24-FEB-2005.
XX
PF   15-JUL-2004; 2004US-00892981.
XX
PR   27-SEP-2000; 2000US-00671773.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2005-180830/19.
XX
PT   New pituitary adenylate cyclase activating peptide (PACAP) polypeptide,
PT   useful for stimulating the release of insulin from pancreatic beta cells
PT   in a glucose-dependent manner, thus treating metabolic disorder e.g.
PT   diabetes.
XX
PS   Claim 1; SEQ ID NO 72; 123pp; English.
XX
CC   The invention relates to a novel pituitary adenylate cyclase activating
CC   peptide (PACAP) polypeptide selected from any one of 188 fully defined
CC   sequences given in the specification, and their functionally equivalent
CC   fragments, derivatives and variants. The invention further comprises: a
CC   polynucleotide encoding a polypeptide sequence above or its degenerate
CC   variant; a vector comprising the polynucleotide; a host cell comprising a
CC   vector; a method for producing the polypeptide; a pharmaceutical
CC   composition comprising the polypeptide in combination with a
CC   pharmaceutical carrier; a gene therapy composition comprising the
CC   polynucleotide in combination with a therapeutic gene therapy vector; a
CC   purified antibody which binds specifically to the polypeptide; a
CC   vasoactive intestinal peptide variant having one of the structures given
CC   in the specification and their functional equivalents; and a method for
CC   stimulating insulin release in a glucose-dependent manner in a mammal. An
CC   agonist of the PACAP R3 polypeptide is useful for treating a metabolic
CC   disorder e.g., type 2 diabetes or pre-diabetic state of impaired glucose
CC   tolerance in a mammal and has respiratory-gen., metabolic, and
CC   antidiabetic activities. The polypeptide is useful for treating
CC   respiratory diseases. The polypeptide is useful for stimulating the
CC   release of insulin from pancreatic beta cells in a glucose-dependent
CC   manner, thus treating metabolic disorder such as diabetes or impaired
CC   glucose tolerance, a prediabetic state. This sequence represents a
CC   peptide capable of stimulating insulin release in a glucose-dependent
CC   fashion of the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

```
RESULT 5
AEE62501
ID   AEE62501 standard; peptide; 31 AA.
XX
AC   AEE62501;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2-receptor peptide agonist SEQ ID NO 324.
XX
KW   VPAC2 receptor; VPAC2 receptor agonist; antidiabetic; immunosuppressive;
KW   antiarteriosclerotic; cardiovascular-gen.; antiasthmatic;
KW   antiinflammatory; antirheumatic; antiarthritic; diabetes mellitus;
KW   non-insulin-dependent diabetes; insulin-dependent diabetes;
KW   endocrine disease; gastrointestinal disease; nutritional disorder;
KW   obesity; cardiovascular disease; atherosclerosis; respiratory disease;
KW   asthma; autoimmune disorder; inflammation; rheumatoid arthritis.
XX
OS   Synthetic.
XX
PN   WO2005113594-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017435.
XX
PR   21-MAY-2004; 2004US-0573739P.
PR   12-NOV-2004; 2004US-0627880P.
PR   25-FEB-2005; 2005US-0656601P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812225/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for treating diseases, e.g.
PT   diabetes, obesity, atherosclerosis, cardiovascular disease, asthma,
PT   autoimmune diseases, inflammatory diseases, or rheumatoid arthritis.
XX
PS   Disclosure; SEQ ID NO 324; 400pp; English.
XX
CC   This invention describes novel VPAC2 receptor peptide agonists which have
CC   antidiabetic, immunosuppressive, antiarteriosclerotic, cardiovascular,
CC   antiasthmatic, antiinflammatory, antirheumatic and antiarthritic
CC   activity. The novel agonists may contain an N-terminal modifications e.g.
CC   the addition of a group selected from: acetyl, propionyl, butyryl,
CC   pentanoyl, hexanoyl, methionine, methionine sulfoxide, 3-phenylpropionyl,
CC   phenylacetyl, benzoyl, norleucine, D-histidine, isoleucine, or 3-
CC   mercaptopropionyl. The agonist is used as a medicament, or is useful for
CC   manufacturing a medicament for use in the treatment of non-insulin- or
CC   insulin-dependent diabetes or for the treatment of other diseases, e.g.
CC   obesity, atherosclerosis, asthma, cardiovascular disease, autoimmune
CC   diseases, inflammatory diseases, or rheumatoid arthritis. This sequence
CC   represents a VPAC2 receptor peptide agonist used in the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```



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              ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 6
AEE35467
ID   AEE35467 standard; peptide; 31 AA.
XX
AC   AEE35467;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2 receptor peptide agonist, SEQ ID NO: 58.
XX
KW   VPAC2 receptor agonist; G protein coupled receptor;
KW   non-insulin dependent diabetes; antidiabetic; pharmaceutical;
KW   insulin dependent diabetes.
XX
OS   Synthetic.
XX
PN   WO2005113593-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017434.
XX
PR   21-MAY-2004; 2004US-0573080P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812224/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for the manufacture of a
PT   medicament for treating or insulin-dependent or non-insulin-dependent
PT   diabetes.
XX
PS   Disclosure; SEQ ID NO 58; 217pp; English.
XX
CC   The invention relates to a VPAC2 receptor peptide agonist comprising a
CC   sequence of the formulae given in the specification, optionally including
CC   a C-terminal extension and an N-terminal modification. The VPAC2 receptor
CC   peptide agonist is useful for the manufacture of a medicament for
CC   treating or insulin-dependent or non-insulin-dependent diabetes. The
CC   present sequence represents a VPAC2 receptor agonist peptide of the
CC   invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 7
AEE33009
ID   AEE33009 standard; peptide; 31 AA.
XX
AC   AEE33009;
```

```
XX
DT   09-FEB-2006  (first entry)
XX
DE   Insulin release stimulating peptide, R3P66, SEQ ID 72.
XX
KW   Antidiabetic; pituitary adenylate cyclase activating peptide receptor 3;
KW   diabetes; impaired glucose tolerance.
XX
OS   Unidentified.
XX
PN   US6972319-B1.
XX
PD   06-DEC-2005.
XX
PF   27-SEP-2000; 2000US-00671773.
XX
PR   28-SEP-1999;   99US-0240954P.
PR   15-JUN-2000; 2000US-0327556P.
XX
PA   (FARB ) BAYER PHARM CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2006-007570/01.
XX
PT   New pituitary adenylate cyclase activating peptide (PACAP) receptor 3
PT   agonist polypeptide, useful in preparing a pharmaceutical composition for
PT   treating diabetes or impaired glucose tolerance in a mammal.
XX
PS   Claim 1; SEQ ID NO 72; 121pp; English.
XX
CC   The invention relates to a novel pituitary adenylate cyclase activating
CC   peptide (PACAP) receptor 3 agonist. The invention further includes a
CC   pharmaceutical composition comprising the polypeptide and a carrier; a
CC   method for treating diabetes or impaired glucose tolerance in a mammal;
CC   and a method for stimulating insulin release in a glucose-dependent
CC   manner in a mammal. The polypeptide is useful in preparing a
CC   pharmaceutical composition for treating diabetes or impaired glucose
CC   tolerance in a mammal. This sequence represents an insulin release
CC   stimulating polypeptide used in the method of the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 8
AEG10440
ID   AEG10440 standard; peptide; 31 AA.
XX
AC   AEG10440;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #417.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
```



```
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 417; 496pp; English.
XX
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 9
AEG28505
ID   AEG28505 standard; peptide; 31 AA.
XX
```

```
AC   AEG28505;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist SEQ ID NO 81.
XX
KW   antidiabetic; immunosuppressive; antiarteriosclerotic; hypotensive;
KW   antilipemic; gynecological; antiasthmatic; protein interaction;
KW   therapeutic; non-insulin dependent diabetes; insulin dependent diabetes;
KW   atherosclerosis; hyperlipidemia; hypertension; cardiovascular disease;
KW   polycystic ovary syndrome; antiinfertility; endocrine disease;
KW   gynecology and obstetrics; asthma; inflammation; respiratory disease;
KW   diabetes; autoimmune disease; immune disorder; endocrine disease;
KW   gastrointestinal disease; metabolic disorder.
XX
OS   Synthetic.
XX
PN   WO2006023358-A1.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028531.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212281/22.
XX
PT   Novel polyethylene glycosylated (PEGylated) vasoactive intestinal peptide
PT   (VIP)-shared type 2 (VPAC2) receptor peptide agonist, useful as
PT   medicament for treating non-insulin- or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 81; 236pp; English.
XX
CC   The invention describes a polyethylene glycosylated (PEGylated)
CC   vasoactive intestinal peptide (VIP)-shared type 2 (VPAC2) receptor
CC   peptide agonist (I) comprising a specific amino acid sequence. (I) is
CC   useful as a medicament or for the manufacture of a medicament for the
CC   treatment of non-insulin-dependent diabetes or insulin-dependent
CC   diabetes. (I) is useful for preventing or treating disorders such as
CC   atherosclerotic disease, hyperlipidemia, hypertension, polycystic ovary
CC   syndrome, asthma, autoimmune disease. (I) has enhanced selectivity,
CC   potency and/or stability, extended half-life and reduced clearance. This
CC   is the amino acid sequence of a PEGylated VPAC2 receptor peptide agonist.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 10
AEH24668
ID   AEH24668 standard; peptide; 31 AA.
XX
AC   AEH24668;
```



```
XX
DT   15-JUN-2006  (first entry)
XX
DE   VIP analog VPAC2 sel Bayer, SEQ ID NO:36 #2.
XX
KW   Pharmaceutical; hyperglycemia; insulin resistance; diabetes;
KW   non-insulin dependent diabetes; antidiabetic; obesity; anorectic;
KW   metabolic acidosis; vasotropic; metabolic;
KW   vasoactive intestinal polypeptide analog; VIP analog.
XX
OS   Synthetic.
XX
PN   US2006079456-A1.
XX
PD   13-APR-2006.
XX
PF   07-OCT-2005; 2005US-00245499.
XX
PR   08-OCT-2004; 2004US-0617500P.
XX
PA   (THER-) THERAPEI PHARM INC.
XX
PI   Nestor J;
XX
DR   WPI; 2006-292473/30.
XX
PT   New vasoactive intestinal polypeptide, useful for treating elevated blood
PT   glucose levels, diabetes, preferably Type II diabetes mellitus, obesity
PT   and insulin resistance.
XX
PS   Claim 1; SEQ ID NO 36; 19pp; English.
XX
CC   The invention relates to vasoactive intestinal polypeptide (VIP) analogs
CC   of the generic sequence shown in AEH24660, AEH24661 or AEH24662, or which
CC   have a specific sequence chosen from SEQ ID NO:1-38 (AEH24616-AEH24653
CC   and AEH24663-AEH24670). The C-termini of polypeptides of the invention
CC   comprise amino acid residues which form an amphipathic alpha-helix. The
CC   invention also relates to recombinant or synthetic methods for producing
CC   a polypeptide of the invention; expression vectors and host cells for the
CC   recombinant production of a polypeptide of the invention; and
CC   pharmaceutical compositions comprising a polypeptide of the invention or
CC   an acceptable salt thereof, and a carrier or excipient. The
CC   pharmaceutical composition optionally further comprises at least one
CC   compound selected from insulin, incretin, glucagon-like peptide (GLP-1),
CC   exendin and analogs thereof, sulfonylureas, biguanides, alpha-glucosidase
CC   inhibitors, thiazolidinediones, peroxisome proliferator activated
CC   receptor (PPAR) agonists, PPAR antagonists and PPAR partial agonists. The
CC   polypeptides of the invention stimulate glucose-dependent insulin
CC   secretion and have an enhanced duration of action. The polypeptides, and
CC   pharmaceutical compositions comprising them are useful in the treatment
CC   of elevated blood glucose levels, diabetes (preferably type 2 diabetes),
CC   insulin resistance, obesity and metabolic acidosis. The present sequence
CC   represents a vasoactive intestinal polypeptide analog, VPAC2 sel Bayer,
CC   which appears to be claimed as a vasoactive intestinal polypeptide analog
CC   of the invention. Note: The present sequence differs from the vasoactive
CC   intestinal polypeptide analog also referred to as SEQ ID NO:36 (AEH24651)
CC   shown in Figure 1.
XX
SQ   Sequence 31 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 31;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

```
                ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

```
RESULT 11
AEE62223
ID   AEE62223 standard; peptide; 32 AA.
XX
AC   AEE62223;
XX
DT   09-FEB-2006  (first entry)
XX
DE   VPAC2-receptor peptide agonist SEQ ID NO 46.
XX
KW   VPAC2 receptor; VPAC2 receptor agonist; antidiabetic; immunosuppressive;
KW   antiarteriosclerotic; cardiovascular-gen.; antiasthmatic;
KW   antiinflammatory; antirheumatic; antiarthritic; diabetes mellitus;
KW   non-insulin-dependent diabetes; insulin-dependent diabetes;
KW   endocrine disease; gastrointestinal disease; nutritional disorder;
KW   obesity; cardiovascular disease; atherosclerosis; respiratory disease;
KW   asthma; autoimmune disorder; inflammation; rheumatoid arthritis.
XX
OS   Synthetic.
XX
PN   WO2005113594-A1.
XX
PD   01-DEC-2005.
XX
PF   19-MAY-2005; 2005WO-US017435.
XX
PR   21-MAY-2004; 2004US-0573739P.
PR   12-NOV-2004; 2004US-0627880P.
PR   25-FEB-2005; 2005US-0656601P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Cummins RC,  Glaesner W,  Gromada JL,  Mayer JP;
PI   Zhang L,  Alsina-Fernandez J;
XX
DR   WPI; 2005-812225/82.
XX
PT   New VPAC2 receptor peptide agonist, useful for treating diseases, e.g.
PT   diabetes, obesity, atherosclerosis, cardiovascular disease, asthma,
PT   autoimmune diseases, inflammatory diseases, or rheumatoid arthritis.
XX
PS   Claim 29; SEQ ID NO 46; 400pp; English.
XX
CC   This invention describes novel VPAC2 receptor peptide agonists which have
CC   antidiabetic, immunosuppressive, antiarteriosclerotic, cardiovascular,
CC   antiasthmatic, antiinflammatory, antirheumatic and antiarthritic
CC   activity. The novel agonists may contain an N-terminal modifications e.g.
CC   the addition of a group selected from: acetyl, propionyl, butyryl,
CC   pentanoyl, hexanoyl, methionine, methionine sulfoxide, 3-phenylpropionyl,
CC   phenylacetyl, benzoyl, norleucine, D-histidine, isoleucine, or 3-
CC   mercaptopropionyl. The agonist is used as a medicament, or is useful for
CC   manufacturing a medicament for use in the treatment of non-insulin- or
CC   insulin-dependent diabetes or for the treatment of other diseases, e.g.
CC   obesity, atherosclerosis, asthma, cardiovascular disease, autoimmune
CC   diseases, inflammatory diseases, or rheumatoid arthritis. This sequence
CC   represents a VPAC2 receptor peptide agonist used in the invention.
XX
SQ   Sequence 32 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 32;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-14;
```



```
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              ||||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
```

```
RESULT 12
AEG10072
ID   AEG10072 standard; peptide; 32 AA.
XX
AC   AEG10072;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #49.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Disclosure; SEQ ID NO 49; 496pp; English.
XX
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
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CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 32 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 32;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 13
AEG10365
ID   AEG10365 standard; peptide; 32 AA.
XX
AC   AEG10365;
XX
DT   04-MAY-2006  (first entry)
XX
DE   PEGylated VPAC2 receptor peptide agonist #342.
XX
KW   Therapeutic; vasoactive intestinal peptide;
KW   vasoactive intestinal peptide-shared type 2; VPAC2 receptor agonist;
KW   non-insulin dependent diabetes; insulin-dependent diabetes; obesity;
KW   atherosclerosis; hyperlipidemia; hypercholesterolemia; hypertension;
KW   cardiovascular disease; cerebrovascular disease; asthma;
KW   reproduction disorder; female sexual dysfunction;
KW   male sexual dysfunction; ulcer; sleep disorder;
KW   lipid metabolism disorder; carbohydrate metabolism disorder;
KW   growth disorder; immune disorder; autoimmune disease;
KW   systemic lupus erythematosus; inflammation; antidiabetic; anorectic;
KW   antiarteriosclerotic; antilipemic; hypotensive; cardiovascular-gen.;
KW   cerebroprotective; antiasthmatic; gynecological; antiandrogenic;
KW   antiestrogenic; neuroleptic; endocrine-gen.; antiulcer; hypnotic;
KW   metabolic; CNS-Gen.; immunomodulator; immunosuppressive;
KW   antiinflammatory; dermatological.
XX
OS   Synthetic.
XX
PN   WO2006023356-A2.
XX
PD   02-MAR-2006.
XX
PF   11-AUG-2005; 2005WO-US028520.
XX
PR   18-AUG-2004; 2004US-0602350P.
PR   18-AUG-2004; 2004US-0602461P.
XX
PA   (ELIL ) LILLY & CO ELI.
XX
PI   Bokvist BK,  Mayer JP,  Zhang L,  Alsina-Fernandez J,  Vick AM;
XX
DR   WPI; 2006-212280/22.
XX
PT   Novel polyethylene glycolsylated vasoactive intestinal peptide (VIP)-
PT   shared type 2 (VPAC2) receptor peptide agonist, useful as medicament for
PT   treating non-insulin-dependent or insulin-dependent diabetes.
XX
PS   Claim 41; SEQ ID NO 342; 496pp; English.
XX
```



```
CC   The invention relates to polyethylene glycol(PEG)-ylated vasoactive
CC   intestinal peptide (VIP)-shared type 2 (VPAC2) receptor peptide agonists.
CC   The VPAC2 receptor peptide agonists are useful as a medicament and for
CC   the manufacture of a medicament for the treatment of non-insulin-
CC   dependent diabetes, insulin-dependent diabetes, obesity, atherosclerotic
CC   disease, hyperlipidemia, hypercholesterolemia, hypertension,
CC   cardiovascular disease, cerebrovascular disease, asthma, male and female
CC   reproduction problems, sexual disorders, ulcers, sleep disorders,
CC   disorders of lipid and carbohydrate metabolism, circadian dysfunction,
CC   growth disorders, immune diseases including autoimmune diseases (e.g.
CC   systemic lupus erythematosus), and acute and chronic inflammatory
CC   diseases. This sequence represents a PEGylated VPAC2 receptor agonist of
CC   the invention.
XX
SQ   Sequence 32 AA;

  Query Match             100.0%;  Score 159;  DB 10;  Length 32;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 14
AAG70628
ID   AAG70628 standard; peptide; 40 AA.
XX
AC   AAG70628;
XX
DT   13-JUL-2001  (first entry)
XX
DE   Insulin secretagogue peptide R3P172.
XX
KW   Pituitary adenylate cyclase activating peptide; PACAP;
KW   insulin secretagogue peptide; antidiabetic; antiasthmatic; hypotensive;
KW   cardiant; antiulcer; respiratory disease; diabetes; glucose intolerance;
KW   asthma; male fertility; gene therapy; cardiovascular disease; ulcer;
KW   PACAP receptor 3; R3; agonist.
XX
OS   Synthetic.
XX
PN   WO200123420-A2.
XX
PD   05-APR-2001.
XX
PF   27-SEP-2000; 2000WO-US026638.
XX
PR   28-SEP-1999;   99US-00407832.
PR   15-JUN-2000; 2000US-00595280.
XX
PA   (FARB ) BAYER CORP.
XX
PI   Pan C,  Tsutsumi M,  Shanafelt AB;
XX
DR   WPI; 2001-367200/38.
XX
PT   Novel pituitary adenylate cyclase activating peptide receptor 3 agonist
PT   useful for treating type 2 diabetes, asthma, hypertension, ulcers and
PT   cardiovascular diseases.
XX
PS   Claim 1; Fig 1; 62pp; English.
XX
CC   The present sequence is one of a large number of novel pituitary
```

```
CC   adenylate cyclase activating peptide (PACAP) receptor 3 (R3) agonist
CC   polypeptides. The polypeptides stimulate insulin release from pancreatic
CC   beta cells. They are useful for treating metabolic disorders such as type
CC   2 diabetes and the pre-diabetic state of impaired glucose tolerance. They
CC   are useful for treating respiratory diseases and for stimulating insulin
CC   release in a glucose-dependent manner. The R3 agonists are useful for
CC   treating and/or preventing diseases and conditions such as diabetes,
CC   asthma, hypertension, male reproduction problems including human sperm
CC   motility, cardiovascular diseases and ulcers. They are useful in gene
CC   therapy
XX
SQ   Sequence 40 AA;

  Query Match             100.0%;  Score 159;  DB 4;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 9.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


RESULT 15
ADV90980
ID   ADV90980 standard; peptide; 40 AA.
XX
AC   ADV90980;
XX
DT   24-MAR-2005  (first entry)
XX
DE   Glucagon-like peptide (GLP) 1 receptor agonist seqid 174.
XX
KW   antiarthritic; virucide; fungicide; antiinflammatory;
KW   cardiovascular-gen.; antiasthmatic; pharmaceutical; polymer; arthritis;
KW   viral infection; fungal infection; inflammation; asthma;
KW   cardiovascular disease; GLP-1 receptor; insulin;
KW   glucagon-like peptide receptor; agonist.
XX
OS   Unidentified.
XX
PN   WO2005000360-A2.
XX
PD   06-JAN-2005.
XX
PF   21-MAY-2004; 2004WO-US016212.
XX
PR   23-MAY-2003; 2003US-0473213P.
XX
PA   (NEKT-) NEKTAR THERAPEUTICS AL CORP.
XX
PI   Harris JM,  Kozlowski A,  Mcmanus SP,  Bentley MD,  Charles SA;
XX
DR   WPI; 2005-101234/11.
XX
PT   Polymeric reagent for preparing conjugate used for pharmaceutical
PT   preparations, comprises a carbamate or urethane group positioned between
PT   water-soluble polymer and reactive groups.
XX
PS   Example 9; SEQ ID NO 174; 113pp; English.
XX
CC   The invention describes a polymeric reagent comprising a carbamate or
CC   urethane group (I) positioned between a water-soluble polymer and a
CC   reactive group. The nitrogen atom in the carbamate or urethane group is
CC   proximal to the water-soluble polymer. The carbonyl carbon atom of the
CC   carbamate or urethane group is proximal to the reactive group. Also
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CC   described are: preparing the polymeric reagent; preparing the conjugate;
CC   a pharmaceutical preparation comprising the conjugate in combination with
CC   a pharmaceutical excipient; delivering the conjugate; and a polymer
CC   comprising a water-soluble polymer, carbamate or urethane group, and a
CC   reactive group, the water-soluble polymer is linked to the nitrogen atom
CC   of carbamate or urethane group through either direct covalent bond or
CC   primary spacer group, the reactive group is linked to the carbonyl carbon
CC   atom of carbamate or urethane group through either direct covalent bond
CC   or secondary spacer group. The reagent is useful for preparing a
CC   conjugate used in the pharmaceutical preparation and for treating
CC   diseases such as arthritis, viral infections, fungal infections,
CC   inflammatory disorders, asthma and cardiovascular disorders. The
CC   polymeric reagent provides a unique series of atoms to provide customized
CC   degradation rates. This is the amino acid sequence of a GLP-1 receptor
CC   agonist useful in the creation of conjugates of the invention useful in
CC   regulating insulin production.
XX
SQ   Sequence 40 AA;

  Query Match             100.0%;  Score 159;  DB 9;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 9.4e-14;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31
              |||||||||||||||||||||||||||||||
Db          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31


Search completed: July 12, 2007, 13:33:24
Job time : 216 secs
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SCORE Search Results Details for Application 10500680 and Search Result 20070712_125230_us-10-500-680-1.rup.

Score Home Page Retrieve Application List SCORE System Overview SCORE FAQ Comments / Suggestions

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DM protein - protein search, using sw model

Run on:         July 12, 2007, 13:30:13 ; Search time 346 Seconds
                                          (without alignments)
                                          96.057 Million cell updates/sec

Title:          US-10-500-680-1
Perfect score:  159
Sequence:       1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table:  BLOSUM62
                Gapop 10.0 , Gapext 0.5

Searched:       3281787 seqs, 1072124677 residues

Total number of hits satisfying chosen parameters:      3281787

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       UniProt_8.4:*
                 1:  uniprot_sprot:*
                 2:  uniprot_trembl:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES
```

Result No.	Score	% Query Match	Length	DB	ID	Description
1	123	77.4	28	1	VIP_CANFA	P63289 canis famil
2	123	77.4	28	1	VIP_CAPHI	P63290 capra hircu
3	123	77.4	28	1	VIP_MACMU	P84488 macaca mula
4	123	77.4	28	1	VIP_SHEEP	P63291 ovis aries
5	123	77.4	72	1	VIP_PIG	P01284 sus scrofa
6	123	77.4	72	1	VIP_RABIT	P32649 oryctolagus
7	123	77.4	118	2	Q5TCY7_HUMAN	Q5tcy7 homo sapien
8	123	77.4	145	2	Q7M2Y9_MACFA	Q7m2y9 macaca fasc

9	123	77.4	153	2	Q7TSR4_9MURI	Q7tsr4 arvicanthis
10	123	77.4	169	2	Q5TCY8_HUMAN	Q5tcy8 homo sapien
11	123	77.4	170	1	VIP_BOVIN	P81401 bos taurus
12	123	77.4	170	1	VIP_HUMAN	P01282 homo sapien
13	123	77.4	170	1	VIP_MOUSE	P32648 mus musculu
14	123	77.4	170	1	VIP_RAT	P01283 rattus norv
15	123	77.4	170	2	Q5TCY9_HUMAN	Q5tcy9 homo sapien
16	113	71.1	28	2	Q9PRN8_CARAU	Q9prn8 carassius a
17	112	70.4	72	1	VIP_CAVPO	P04566 cavia porce
18	111	69.8	25	1	VIP_GADMO	P09684 gadus morhu
19	111	69.8	172	2	Q9DE29_BRARE	Q9de29 brachydanio
20	110	69.2	28	1	VIP_ALLMI	P48142 alligator m
21	110	69.2	28	1	VIP_RANRI	P81016 rana ridibu
22	110	69.2	38	2	Q75W94_HALRO	Q75w94 halocynthia
23	110	69.2	38	2	Q8IU37_SEPLE	Q8iu37 sepioteuthi
24	110	69.2	38	2	Q8IU36_PERAM	Q8iu36 periplaneta
25	110	69.2	38	2	Q8IU38_HYDMA	Q8iu38 hydra magni
26	110	69.2	38	2	Q8IU39_DUGJA	Q8iu39 dugesia jap
27	110	69.2	38	2	Q75W92_9PERC	Q75w92 stephanolep
28	110	69.2	38	2	Q75W87_ONCMY	Q75w87 oncorhynchu
29	110	69.2	38	2	Q75W90_9TELE	Q75w90 sardinops m
30	110	69.2	38	2	Q8AYP4_ACISC	Q8ayp4 acipenser s
31	110	69.2	38	2	Q8AYP5_TRAJP	Q8ayp5 trachurus j
32	110	69.2	45	2	Q1ZZB9_PODSI	Q1zzb9 podarcis si
33	110	69.2	62	2	Q53BI4_BUNHO	Q53bi4 bunopithecu
34	110	69.2	62	2	Q53BI3_PONPY	Q53bi3 pongo pygma
35	110	69.2	62	2	Q53BI5_MACMU	Q53bi5 macaca mula
36	110	69.2	62	2	Q53BI2_9PRIM	Q53bi2 gorilla gor
37	110	69.2	70	2	Q4TZX3_ANAPL	Q4tzx3 anas platyr
38	110	69.2	80	2	Q3HS35_ANAPL	Q3hs35 anas platyr
39	110	69.2	86	2	Q4TZY9_9AVES	Q4tzy9 anser anser
40	110	69.2	109	2	Q1ZYS1_RABIT	Q1zys1 oryctolagus
41	110	69.2	138	2	Q98SP4_ONCMY	Q98sp4 oncorhynchu
42	110	69.2	139	2	Q53BH1_HUMAN	Q53bh1 homo sapien
43	110	69.2	139	2	Q53BH0_PANTR	Q53bh0 pan troglod
44	110	69.2	161	2	Q5IFL0_9PRIM	Q5ifl0 saimiri bol
45	110	69.2	162	2	Q5IFK8_PANTR	Q5ifk8 pan troglod

ALIGNMENTS

```
RESULT 1
VIP_CANFA
ID   VIP_CANFA      STANDARD;      PRT;    28 AA.
AC   P63289; P04565;
DT   13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT   13-AUG-1987, sequence version 1.
DT   02-MAY-2006, entry version 12.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Carnivora; Caniformia; Canidae;
OC   Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA   Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT   "Purification and amino acid sequences of dog, goat and guinea pig
RT   VIPs.";
RL   Peptides 7 Suppl. 1:17-20(1986).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
```

```
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   PIR; A60304; A60304.
DR   HSSP; P18509; 1GEA.
DR   Ensembl; ENSCAFG00000000538; Canis familiaris.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043939.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 2
VIP_CAPHI
ID   VIP_CAPHI      STANDARD;      PRT;    28 AA.
AC   P63290; P04565;
DT   13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT   13-AUG-1987, sequence version 1.
DT   07-FEB-2006, entry version 10.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Capra hircus (Goat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC   Pecora; Bovidae; Caprinae; Capra.
OX   NCBI_TaxID=9925;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA   Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT   "Purification and amino acid sequences of dog, goat and guinea pig
RT   VIPs.";
RL   Peptides 7 Suppl. 1:17-20(1986).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   HSSP; P18509; 1GEA.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
```



```
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043940.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 3
VIP_MACMU
ID   VIP_MACMU      STANDARD;      PRT;    28 AA.
AC   P84488;
DT   30-AUG-2005, integrated into UniProtKB/Swiss-Prot.
DT   29-MAR-2005, sequence version 1.
DT   18-APR-2006, entry version 9.
DE   Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE   polypeptide).
GN   Name=VIP;
OS   Macaca mulatta (Rhesus macaque).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;
OC   Catarrhini; Cercopithecidae; Cercopithecinae; Macaca.
OX   NCBI_TaxID=9544;
RN   [1]
RP   PROTEIN SEQUENCE.
RX   MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RA   Yu J.-H., Xin Y., Eng J., Yalow R.S.;
RT   "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RT   sequences.";
RL   Regul. Pept. 32:39-45(1991).
CC   -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC       stimulates myocardial contractility, increases glycogenolysis and
CC       relaxes the smooth muscle of trachea, stomach and gall bladder.
CC   -!- SUBCELLULAR LOCATION: Secreted protein.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   PIR; B60071; B60071.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Hormone.
FT   PEPTIDE       1     28       Vasoactive intestinal peptide.
FT                              /FTId=PRO_0000043942.
FT   MOD_RES       28    28       Asparagine amide.
SQ   SEQUENCE   28 AA;  3327 MW;  EF313FB573FF6F3F CRC64;

  Query Match             77.4%;  Score 123;  DB 1;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 6.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;
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SCORE Search

This page gives you Search Results detail for the Application 10500680 and Search Result 20070712_125232_us-1

GenCore version 6.2.1

DM protein - protein search, using sw model

Run on: July 12, 2007, 13:33:43 ; Search time 39 Seconds
(without alignments)
76.480 Million cell updates/sec

Title: US-10-500-680-1
Perfect score: 159
Sequence: 1 HSDAVFTDNYTRLRKQVAAKKYLQSIKNKRY 31

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	123	77.4	28	2	B60071	vasoactive intesti
2	123	77.4	28	2	A60304	vasoactive intesti
3	123	77.4	55	1	VRBO	vasoactive intesti
4	123	77.4	55	1	VRRB	vasoactive intesti
5	123	77.4	55	1	VRSH	vasoactive intesti
6	123	77.4	58	1	VRPG	vasoactive intesti
7	123	77.4	145	2	A60038	vasoactive intesti
8	123	77.4	170	1	VRHU	vasoactive intesti
9	123	77.4	170	1	VRRT	vasoactive intesti
10	123	77.4	170	2	A60037	vasoactive intesti
11	112	70.4	55	1	VRGP	vasoactive intesti

12	111	69.8	25	2	JQ0361	vasoactive intesti
13	110	69.2	38	2	A49165	pituitary adenylat
14	110	69.2	165	1	VRCH	vasoactive intesti
15	110	69.2	173	2	S34767	neuropeptides prec
16	110	69.2	175	2	A37786	pituitary adenylat
17	110	69.2	176	2	I84638	pituitary adenylat
18	110	69.2	176	2	A34044	pituitary adenylat
19	109	68.6	28	2	A60303	vasoactive intesti
20	107	67.3	28	2	A38232	vasoactive intesti
21	107	67.3	195	2	I50456	pituitary adenylat
22	104	65.4	38	2	A61070	pituitary adenylat
23	95	59.7	27	2	A61071	pituitary adenylat
24	81	50.9	103	2	A41410	somatoliberin prec
25	79	49.7	35	1	HWGHD	exendin-2 - Gila m
26	74	46.5	38	1	HWGHS	exendin-1 - Mexica
27	73	45.9	104	2	A32731	somatoliberin prec
28	72	45.3	44	1	RHBOS	somatoliberin - bo
29	67	42.1	44	1	RHPG	somatoliberin - pi
30	67	42.1	108	1	RHHUS	somatoliberin prec
31	63	39.6	27	1	SECH	secretin - chicken
32	61	38.4	31	2	S44472	glucagon G2 - Nort
33	61	38.4	131	1	SEPG	secretin precursor
34	59	37.1	31	2	S44471	glucagon G1 - Nort
35	58	36.5	133	2	JC2202	secretin precursor
36	58	36.5	443	2	C70392	gamma-glutamyl pho
37	57	35.8	134	2	A40959	secretin precursor
38	55	34.6	27	2	A27267	secretin - dog
39	53	33.3	27	1	S07443	secretin - human
40	53	33.3	27	1	SEBO	secretin - bovine
41	53	33.3	27	1	SESH	secretin - sheep
42	53	33.3	206	2	I51301	proglucagon - chic
43	52.5	33.0	230	2	T19364	hypothetical prote
44	52	32.7	38	1	GCFIK	glucagon-like pept
45	52	32.7	418	2	A97300	gamma-glutamyl pho

ALIGNMENTS

RESULT 1
B60071
vasoactive intestinal peptide - rhesus macaque
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C;Accession: B60071
R;Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A;Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A;Reference number: A60071; MUID:91164506; PMID:2003150
A;Accession: B60071
A;Status: protein sequence not shown
A;Molecule type: protein
A;Residues: 1-28 <YUA>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Note: the sequence is identical with the human sequence
C;Superfamily: glucagon
C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 77.4%; Score 123; DB 2; Length 28;
Best Local Similarity 85.7%; Pred. No. 2e-10;
Matches 24; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

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Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||:|| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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RESULT 2
A60304
vasoactive intestinal peptide - dog
N;Alternate names: VIP
C;Species: Canis lupus familiaris (dog)
C;Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C;Accession: A60304
R;Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A;Title: Purification and sequencing of dog and guinea pig VIP's.
A;Reference number: A60304
A;Accession: A60304
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0
C;Superfamily: glucagon
C;Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

  Query Match             77.4%;  Score 123;  DB 2;  Length 28;
  Best Local Similarity   85.7%;  Pred. No. 2e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||||:| |||| || |
Db          1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28


RESULT 3
VRBO
vasoactive intestinal peptide precursor - bovine (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Bos primigenius taurus (cattle)
C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
C;Accession: A61643; A61644; S09689
R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Rel
A;Reference number: A61643; MUID:85027215; PMID:6548446
A;Accession: A61643
A;Molecule type: protein
A;Residues: 1-27 <CAR>
A;Cross-references: UNIPARC:UPI0000173515
R;Carlquist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A;Reference number: A61644; MUID:80092152; PMID:520589
A;Accession: A61644
A;Molecule type: protein
A;Residues: 28-55 <CA2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.; Vanderme
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine is
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation; comparison of mammalian PHI sequences
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

  Query Match             77.4%;  Score 123;  DB 1;  Length 55;
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  Best Local Similarity   85.7%;  Pred. No. 3.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||||:| |||| || |
Db         28 HSDAVFTDNYTRLRKQMAVKKYLNSILN 55


RESULT 4
VRRB
vasoactive intestinal peptide precursor - rabbit (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
C;Accession: B60415; A60415
R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, P.; Vanderme
Peptides 11, 123-128, 1990
A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A;Reference number: A60415; MUID:90259845; PMID:2342988
A;Accession: B60415
A;Molecule type: protein
A;Residues: 1-27 <GOS>
A;Cross-references: UNIPARC:UPI00000351DB
A;Accession: A60415
A;Molecule type: protein
A;Residues: 28-55 <GO2>
A;Cross-references: UNIPARC:UPI00000351DB
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

  Query Match             77.4%;  Score 123;  DB 1;  Length 55;
  Best Local Similarity   85.7%;  Pred. No. 3.9e-10;
  Matches   24;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 HSDAVFTDNYTRLRKQVAAKKYLQSIKN 28
              |||||||||||||||||:| |||| || |
Db         28 HSDAVFTDNYTRLRKQMAVKKYLNSILN 55


RESULT 5
VRSH
vasoactive intestinal peptide precursor - sheep (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: B60072; A60072; C61063; A43974
R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine is
A;Reference number: A60072; MUID:91239834; PMID:2034821
A;Accession: B60072
A;Molecule type: protein
A;Residues: 1-27 <BOU>
A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A;Accession: A60072
A;Molecule type: protein
A;Residues: 28-55 <BO2>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreactivity in ovi
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